



Clinical trial results:

Safety and Immunogenicity Study of Full Schedule (3-Dose of SHAN6™) or SHAN6™-SHAN5®-SHAN6™ Versus the Licensed Vaccine SHAN5® With bOPV and IPV When Administered Per National Immunization Schedule in Healthy Kenyan Infants

Summary

EudraCT number	2022-003923-17
Trial protocol	Outside EU/EEA
Global end of trial date	23 August 2022

Results information

Result version number	v1 (current)
This version publication date	29 March 2023
First version publication date	29 March 2023

Trial information

Trial identification

Sponsor protocol code	SH600008
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Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	-
WHO universal trial number (UTN)	U1111-1217-1674

Notes:

Sponsors

Sponsor organisation name	Sanofi Pasteur
Sponsor organisation address	14 Espace Henry Vallée, Lyon, France, 69007
Public contact	Trial Transparency Team, Sanofi Pasteur, contact-us@sanofi.com
Scientific contact	Trial Transparency Team, Sanofi Pasteur, contact-us@sanofi.com

Notes:

Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	No
Does article 45 of REGULATION (EC) No 1901/2006 apply to this trial?	No
Does article 46 of REGULATION (EC) No 1901/2006 apply to this trial?	Yes

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	22 December 2022
Is this the analysis of the primary completion data?	No
Global end of trial reached?	Yes
Global end of trial date	23 August 2022
Was the trial ended prematurely?	Yes

Notes:

General information about the trial

Main objective of the trial:

The first primary objective was to demonstrate the non-inferiority of SHAN6™ compared to the licensed control vaccines SHAN 5® (+ bivalent oral polio vaccine [bOPV] + inactivated polio vaccine [IPV]) with respect to the adjusted geometric mean concentration (aGMC) ratio for anti-pertussis toxoid (PT) and anti-fimbriae (FIM) for pertussis and seroprotection rates for all other antigens 28 days after a 3 dose primary series (6, 10 and 14 weeks).

If the first objective was reached, the second primary objective was to demonstrate the non-inferiority of mixed schedule administration of SHAN6™ and SHAN 5® (+ bOPV) compared to SHAN 5® (+bOPV + IPV) as a 3 dose primary series with respect to the aGMC ratio for anti-PT and anti-FIM for pertussis and seroprotection rates for all other antigens 28 days after a 3 dose primary series.

Protection of trial subjects:

Vaccinations were performed by qualified and trained study personnel. Subjects with allergy to any of the vaccine components were not vaccinated. After vaccination, subjects were also kept under clinical observation for 30 minutes to ensure their safety. Appropriate medical equipment were also available on site in case of any immediate allergic reactions. Safety of trial subjects were monitored during the conduct of the study.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	13 October 2020
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	No

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	Kenya: 690
Worldwide total number of subjects	690
EEA total number of subjects	0

Notes:

Subjects enrolled per age group

In utero	0
Preterm newborn - gestational age < 37 wk	0
Newborns (0-27 days)	0
Infants and toddlers (28 days-23 months)	690

Children (2-11 years)	0
Adolescents (12-17 years)	0
Adults (18-64 years)	0
From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

Study was conducted at 6 active sites in Kenya. A total of 690 subjects were enrolled and vaccinated in the study from 13 October 2022 to 05 May 2021.

Pre-assignment

Screening details:

The study was planned to be conducted in two periods: primary phase and booster phase. Due to unavailability of investigational and control vaccines, study was early terminated. Due to early termination of the study, booster phase was not conducted, hence no booster vaccination was administered to the subjects.

Period 1

Period 1 title	Primary Phase (Up to Day 84) (overall period)
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Not blinded

Arms

Are arms mutually exclusive?	Yes
Arm title	Group A: SHAN6

Arm description:

Infants aged 6-8 weeks (at the time of enrollment) received SHAN6 vaccine, co-administered with pneumococcal conjugate vaccine (PCV) and oral rotavirus vaccine (ORV) vaccines at the age of 6 to 8 weeks, 10 to 12 weeks and 14-16 weeks in the primary phase of the study.

Arm type	Experimental
Investigational medicinal product name	Hexavalent DTwP-HepB-Hib-IPV vaccine
Investigational medicinal product code	
Other name	SHAN6™
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

0.5 millilitres (mL), intramuscular dose.

Investigational medicinal product name	Rotavirus, live attenuated (ORV)
Investigational medicinal product code	
Other name	RotaTeq®
Pharmaceutical forms	Oral suspension
Routes of administration	Oral use

Dosage and administration details:

2 mL, oral dose.

Investigational medicinal product name	Pneumococcal polysaccharide conjugate vaccine (PCV)
Investigational medicinal product code	
Other name	Synflorix®
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

0.5 mL, intramuscular dose.

Arm title	Group B: SHAN6/SHAN 5+bOPV/SHAN6
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Arm description:

Infants aged 6-8 weeks (at the time of enrollment) received SHAN6 vaccine at the age of 6 to 8 weeks, along with SHAN5 + bOPV at the age of 10 to 12 weeks and SHAN6 at the age of 14-16 weeks, co-administered with PCV and ORV vaccines at the age of 6 to 8 weeks, 10 to 12 weeks and 14-16 weeks

in the primary phase of the study.

Arm type	Experimental
Investigational medicinal product name	Hexavalent DTwP-HepB-Hib-IPV vaccine
Investigational medicinal product code	
Other name	SHAN6™
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

0.5 mL, intramuscular dose.

Investigational medicinal product name	Rotavirus, live attenuated (ORV)
Investigational medicinal product code	
Other name	RotaTeq®
Pharmaceutical forms	Oral suspension
Routes of administration	Oral use

Dosage and administration details:

2 mL, oral dose.

Investigational medicinal product name	Pneumococcal polysaccharide conjugate vaccine (PCV)
Investigational medicinal product code	
Other name	Synflorix®
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

0.5 mL, intramuscular dose.

Investigational medicinal product name	Pentavalent DTwP-HepB-Hib vaccine
Investigational medicinal product code	
Other name	SHAN5™
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

0.5 mL, intramuscular dose.

Investigational medicinal product name	Oral bivalent types 1 and 3; Poliomyelitis Vaccine (bOPV)
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Oral suspension
Routes of administration	Oral use

Dosage and administration details:

0.1 mL, oral dose.

Arm title	Group C: SHAN 5 + bOPV + IPV
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Arm description:

Infants aged 6-8 weeks (at the time of enrollment) received SHAN5+bOPV vaccine, co-administered with PCV and ORV vaccines at the age of 6 to 8 weeks, 10 to 12 weeks and 14-16 weeks and IPV at 14 to 16 weeks in the primary phase of the study.

Arm type	Active comparator
Investigational medicinal product name	Pentavalent DTwP-HepB-Hib vaccine
Investigational medicinal product code	
Other name	SHAN5™
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

0.5 mL, intramuscular dose.

Investigational medicinal product name	Oral bivalent types 1 and 3; Poliomyelitis Vaccine (bOPV)
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Oral suspension
Routes of administration	Oral use
Dosage and administration details: 0.1 mL, oral dose.	
Investigational medicinal product name	Rotavirus, live attenuated (ORV)
Investigational medicinal product code	
Other name	RotaTeq®
Pharmaceutical forms	Oral suspension
Routes of administration	Oral use
Dosage and administration details: 2 mL, oral dose.	
Investigational medicinal product name	Pneumococcal polysaccharide conjugate vaccine (PCV)
Investigational medicinal product code	
Other name	Synflorix®
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use
Dosage and administration details: 0.5 mL, intramuscular dose.	
Investigational medicinal product name	Inactivated polio vaccine
Investigational medicinal product code	
Other name	IMOVAX Polio®
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use
Dosage and administration details: 0.5 mL, intramuscular dose.	

Number of subjects in period 1	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN6	Group C: SHAN 5 + bOPV + IPV
Started	228	231	231
Safety Analysis Set (SafAS)	227	229	231
Completed	215	211	217
Not completed	13	20	14
Adverse event	-	1	1
Lost to follow-up	1	3	2
Withdrawal by parent/guardian	8	8	7
Protocol deviation	4	8	4

Baseline characteristics

Reporting groups

Reporting group title	Group A: SHAN6
Reporting group description: Infants aged 6-8 weeks (at the time of enrollment) received SHAN6 vaccine, co-administered with pneumococcal conjugate vaccine (PCV) and oral rotavirus vaccine (ORV) vaccines at the age of 6 to 8 weeks, 10 to 12 weeks and 14-16 weeks in the primary phase of the study.	
Reporting group title	Group B: SHAN6/SHAN 5+bOPV/SHAN6
Reporting group description: Infants aged 6-8 weeks (at the time of enrollment) received SHAN6 vaccine at the age of 6 to 8 weeks, along with SHAN5 + bOPV at the age of 10 to 12 weeks and SHAN6 at the age of 14-16 weeks, co-administered with PCV and ORV vaccines at the age of 6 to 8 weeks, 10 to 12 weeks and 14-16 weeks in the primary phase of the study.	
Reporting group title	Group C: SHAN 5 + bOPV + IPV
Reporting group description: Infants aged 6-8 weeks (at the time of enrollment) received SHAN5+bOPV vaccine, co-administered with PCV and ORV vaccines at the age of 6 to 8 weeks, 10 to 12 weeks and 14-16 weeks and IPV at 14 to 16 weeks in the primary phase of the study.	

Reporting group values	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN6	Group C: SHAN 5 + bOPV + IPV
Number of subjects	228	231	231
Age categorical Units: Subjects			

Age continuous Units: days arithmetic mean standard deviation	45.0 ± 3.30	44.9 ± 3.01	45.2 ± 3.08
Gender categorical Units: Subjects			
Female	123	108	112
Male	105	123	119

Reporting group values	Total		
Number of subjects	690		
Age categorical Units: Subjects			

Age continuous Units: days arithmetic mean standard deviation	-		
Gender categorical Units: Subjects			
Female	343		
Male	347		

End points

End points reporting groups

Reporting group title	Group A: SHAN6
Reporting group description: Infants aged 6-8 weeks (at the time of enrollment) received SHAN6 vaccine, co-administered with pneumococcal conjugate vaccine (PCV) and oral rotavirus vaccine (ORV) vaccines at the age of 6 to 8 weeks, 10 to 12 weeks and 14-16 weeks in the primary phase of the study.	
Reporting group title	Group B: SHAN6/SHAN 5+bOPV/SHAN6
Reporting group description: Infants aged 6-8 weeks (at the time of enrollment) received SHAN6 vaccine at the age of 6 to 8 weeks, along with SHAN5 + bOPV at the age of 10 to 12 weeks and SHAN6 at the age of 14-16 weeks, co-administered with PCV and ORV vaccines at the age of 6 to 8 weeks, 10 to 12 weeks and 14-16 weeks in the primary phase of the study.	
Reporting group title	Group C: SHAN 5 + bOPV + IPV
Reporting group description: Infants aged 6-8 weeks (at the time of enrollment) received SHAN5+bOPV vaccine, co-administered with PCV and ORV vaccines at the age of 6 to 8 weeks, 10 to 12 weeks and 14-16 weeks and IPV at 14 to 16 weeks in the primary phase of the study.	

Primary: Primary Phase: Percentage of Subjects With Vaccine Seroprotection Against Diphtheria (D), Tetanus (T), Hepatitis B (Hep B), Haemophilus Influenzae Type b (Hib Polyribosyl Ribitol Phosphate [PRP]) and Poliovirus (Polio) Antigens

End point title	Primary Phase: Percentage of Subjects With Vaccine Seroprotection Against Diphtheria (D), Tetanus (T), Hepatitis B (Hep B), Haemophilus Influenzae Type b (Hib Polyribosyl Ribitol Phosphate [PRP]) and Poliovirus (Polio) Antigens ^[1]
End point description: Seroprotection status for diphtheria, tetanus, hepatitis B (HBs), Hib (PRP) and poliovirus antigens (antipolio 1, 2, and 3) were defined as following: anti-diphtheria (Anti-D) and anti-tetanus (Anti-T) antibody (Ab) titers greater than or equal to ($\geq$) 0.01 international unit (IU)/mL; Anti-HBs Ab titers $\geq$ 10 milli-international units (mIU)/mL; Anti-PRP Ab titers $\geq$ 0.15 micrograms (mcg)/mL; Anti-polio 1, 2, and 3 Ab titers $\geq$ 8 (1/dilution[dil]). Analysis was performed on per protocol analysis set (PPAS) which was defined as the subset of enrolled subjects who received at least 1 dose of the study vaccine without any relevant protocol deviations and had available data at specified time point. Here, 'n'=subjects with available data for each specified category.	
End point type	Primary
End point timeframe: 28 days post third dose (i.e., Day 84)	

Notes:

[1] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period. Justification: Data for Group B was not analysed, which is in accordance with the design of the study as pre-specified in the protocol.

End point values	Group A: SHAN6	Group C: SHAN 5 + bOPV + IPV		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	193	188		
Units: percentage of subjects				
number (confidence interval 95%)				
Anti-D (n=193,188)	100 (98.1 to 100)	100 (98.1 to 100)		
Anti-T (n=193,188)	100 (98.1 to 100)	100 (98.1 to 100)		

Anti-HBs (n=191,184)	95.3 (91.2 to 97.8)	92.9 (88.2 to 96.2)		
Anti-PRP (n=191,186)	99.5 (97.1 to 100)	100 (98.0 to 100)		
Anti-Polio 1 (n=192,187)	99.5 (97.1 to 100)	99.5 (97.1 to 100)		
Anti-Polio 2 (n=191,184)	99.5 (97.1 to 100)	97.8 (94.5 to 99.4)		
Anti-Polio 3 (n=191,185)	99.0 (96.3 to 99.9)	100 (98.0 to 100)		

Statistical analyses

Statistical analysis title	Anti-D: SHAN6 vs SHAN5+bOP+IPV
Comparison groups	Group A: SHAN6 v Group C: SHAN 5 + bOPV + IPV
Number of subjects included in analysis	381
Analysis specification	Pre-specified
Analysis type	non-inferiority ^[2]
Parameter estimate	Difference in Percentage
Point estimate	0
Confidence interval	
level	95 %
sides	2-sided
lower limit	-1.95
upper limit	2

Notes:

[2] - Non-inferiority was concluded if the lower limit of 2-sided 95% CI of difference in percentage between 2 groups was greater than -10%.

Statistical analysis title	Anti-T: SHAN6 vs SHAN5+bOP+IPV
Comparison groups	Group A: SHAN6 v Group C: SHAN 5 + bOPV + IPV
Number of subjects included in analysis	381
Analysis specification	Pre-specified
Analysis type	non-inferiority ^[3]
Parameter estimate	Difference in Percentage
Point estimate	0
Confidence interval	
level	95 %
sides	2-sided
lower limit	-1.95
upper limit	2

Notes:

[3] - Non-inferiority was concluded if the lower limit of 2-sided 95% CI of difference in percentage between 2 groups was greater than -10%.

Statistical analysis title	Anti-HBs: SHAN6 vs SHAN5+bOP+IPV
Comparison groups	Group C: SHAN 5 + bOPV + IPV v Group A: SHAN6

Number of subjects included in analysis	381
Analysis specification	Pre-specified
Analysis type	non-inferiority ^[4]
Parameter estimate	Difference in Percentage
Point estimate	2.35
Confidence interval	
level	95 %
sides	2-sided
lower limit	-2.58
upper limit	7.5

Notes:

[4] - Non-inferiority was concluded if the lower limit of 2-sided 95% CI of difference in percentage between 2 groups was greater than -10%.

Statistical analysis title	Anti-PRP: SHAN6 vs SHAN5+bOP+IPV
Comparison groups	Group A: SHAN6 v Group C: SHAN 5 + bOPV + IPV
Number of subjects included in analysis	381
Analysis specification	Pre-specified
Analysis type	non-inferiority ^[5]
Parameter estimate	Difference in Percentage
Point estimate	-0.52
Confidence interval	
level	95 %
sides	2-sided
lower limit	-2.91
upper limit	1.55

Notes:

[5] - Non-inferiority was concluded if the lower limit of 2-sided 95% CI of difference in percentage between 2 groups was greater than -10%.

Statistical analysis title	Anti-Polio 1: SHAN6 vs SHAN5+bOP+IPV
Comparison groups	Group A: SHAN6 v Group C: SHAN 5 + bOPV + IPV
Number of subjects included in analysis	381
Analysis specification	Pre-specified
Analysis type	non-inferiority ^[6]
Parameter estimate	Difference in Percentage
Point estimate	0.01
Confidence interval	
level	95 %
sides	2-sided
lower limit	-2.4
upper limit	2.48

Notes:

[6] - Non-inferiority was concluded if the lower limit of 2-sided 95% CI of difference in percentage between 2 groups was greater than -10%.

Statistical analysis title	Anti-Polio 2: SHAN6 vs SHAN5+bOP+IPV
Comparison groups	Group A: SHAN6 v Group C: SHAN 5 + bOPV + IPV

Number of subjects included in analysis	381
Analysis specification	Pre-specified
Analysis type	non-inferiority ^[7]
Parameter estimate	Difference in Percentage
Point estimate	1.65
Confidence interval	
level	95 %
sides	2-sided
lower limit	-1.08
upper limit	4.96

Notes:

[7] - Non-inferiority was concluded if the lower limit of 2-sided 95% CI of difference in percentage between 2 groups was greater than -10%.

Statistical analysis title	Anti-Polio 3: SHAN6 vs SHAN5+bOP+IPV
Comparison groups	Group A: SHAN6 v Group C: SHAN 5 + bOPV + IPV
Number of subjects included in analysis	381
Analysis specification	Pre-specified
Analysis type	non-inferiority ^[8]
Parameter estimate	Difference in Percentage
Point estimate	-1.05
Confidence interval	
level	95 %
sides	2-sided
lower limit	-3.74
upper limit	1.12

Notes:

[8] - Non-inferiority was concluded if the lower limit of 2-sided 95% CI of difference in percentage between 2 groups was greater than -10%.

Primary: Primary Phase: Adjusted Geometric Mean Concentrations (aGMCs) of Antibodies Against Pertussis Antigens

End point title	Primary Phase: Adjusted Geometric Mean Concentrations (aGMCs) of Antibodies Against Pertussis Antigens ^[9]
End point description:	
Adjusted geometric mean concentrations for anti-pertussis toxin (PT) and anti-fimbriae (FIM) were measured by endotoxin units per millilitre (EU/mL). The adjusted GMCs was computed using analysis of covariance to adjust for baseline disparities and to consider the correlation between pre- and post-concentration, through an Analysis of covariance (ANCOVA) model using the pre-vaccination (Day 0) log-transformed concentration as a covariate for adjustment in order to account for the associated variability. Analysis was performed on PPAS.	
End point type	Primary

End point timeframe:

28 days post third dose (i.e., Day 84)

Notes:

[9] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period. Justification: Data for Group B was not analysed, which is in accordance with the design of the study as pre-specified in the protocol.

End point values	Group A: SHAN6	Group C: SHAN 5 + bOPV + IPV		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	193	188		
Units: EU/mL				
geometric mean (confidence interval 95%)				
Anti-PT	38.9 (30.8 to 49.0)	61.0 (48.2 to 77.2)		
Anti-FIM	809 (662 to 990)	1055 (860 to 1294)		

Statistical analyses

Statistical analysis title	Anti-PT: SHAN6 vs SHAN 5 + bOPV + IPV
Comparison groups	Group A: SHAN6 v Group C: SHAN 5 + bOPV + IPV
Number of subjects included in analysis	381
Analysis specification	Pre-specified
Analysis type	non-inferiority ^[10]
Parameter estimate	Geometric mean ratio
Point estimate	0.637
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.457
upper limit	0.886

Notes:

[10] - Non-inferiority was concluded if the lower limit of 2-sided 95% CI of ratio between 2 groups was greater than 0.5.

Statistical analysis title	Anti-FIM: SHAN6 vs SHAN 5 + bOPV + IPV
Comparison groups	Group A: SHAN6 v Group C: SHAN 5 + bOPV + IPV
Number of subjects included in analysis	381
Analysis specification	Pre-specified
Analysis type	non-inferiority ^[11]
Parameter estimate	Geometric mean ratio
Point estimate	0.767
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.576
upper limit	1.02

Notes:

[11] - Non-inferiority was concluded if the lower limit of 2-sided 95% CI of ratio between 2 groups was greater than 0.5.

Secondary: Primary Phase: Percentage of Subjects With Antibody Titers Above Predefined Thresholds Against Diphtheria (D), Tetanus (T), Hepatitis B (HBs), Haemophilus influenzae type b (Hib [PRP]) and Poliovirus (Polio) Antigens

End point title	Primary Phase: Percentage of Subjects With Antibody Titers Above Predefined Thresholds Against Diphtheria (D), Tetanus (T), Hepatitis B (HBs), Haemophilus influenzae type b (Hib
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End point description:

Antibody titers above the following cut-off for each antigen were defined as: Anti-D Ab titers ≥ 0.01 IU/mL, ≥ 0.1 IU/mL, and ≥ 1.0 IU/mL; Anti-T Ab titers ≥ 0.01 IU/mL, ≥ 0.1 IU/mL, and ≥ 1.0 IU/mL; Anti-HBs Ab titers ≥ 10 mIU/mL and ≥ 100 mIU/mL; Anti-PRP Ab titers ≥ 0.15 mcg/mL and ≥ 1.0 mcg/mL; Anti-Polio 1, 2, and 3 Ab titers ≥ 8 (1/dil). Analysis was performed on FAS population which was defined as the subset of enrolled subjects who received at least 1 dose of the study vaccine. Here, 'n' = subjects with available data for each specified category.

End point type	Secondary
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End point timeframe:

Day 0 (pre-vaccination) and 28 days post third dose (i.e., Day 84)
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End point values	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN 6	Group C: SHAN 5 + bOPV + IPV	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	227	229	231	
Units: percentage of subjects				
number (confidence interval 95%)				
Anti-D: Day 0: ≥ 0.01 (n=221,221,222)	81.0 (75.2 to 85.9)	80.5 (74.7 to 85.5)	83.3 (77.8 to 88.0)	
Anti-D: Day 0: ≥ 0.1 (n=221,221,222)	47.5 (40.8 to 54.3)	49.8 (43.0 to 56.6)	48.6 (41.9 to 55.4)	
Anti-D: Day 0: ≥ 1 (n=221,221,222)	8.6 (5.3 to 13.1)	12.7 (8.6 to 17.8)	10.4 (6.7 to 15.1)	
Anti-D: Post-dose 3: ≥ 0.01 (n=211,209,215)	100 (98.3 to 100)	100 (98.3 to 100)	100 (98.3 to 100)	
Anti-D: Post-dose 3: ≥ 0.1 (n=211,209,215)	98.6 (95.9 to 99.7)	99.0 (96.6 to 99.9)	100 (98.3 to 100)	
Anti-D: Post-dose 3: ≥ 1 (n=211,209,215)	75.4 (69.0 to 81.0)	72.7 (66.2 to 78.6)	82.3 (76.6 to 87.2)	
Anti-T: Day 0: ≥ 0.01 (n=221,221,222)	100 (98.3 to 100)	100 (98.3 to 100)	100 (98.4 to 100)	
Anti-T: Day 0: ≥ 0.1 (n=221,221,222)	99.1 (96.8 to 99.9)	98.6 (96.1 to 99.7)	98.6 (96.1 to 99.7)	
Anti-T: Day 0: ≥ 1 (n=221,221,222)	79.2 (73.2 to 84.3)	77.4 (71.3 to 82.7)	81.1 (75.3 to 86.0)	
Anti-T: Post-dose 3: ≥ 0.01 (n=211,209,215)	100 (98.3 to 100)	100 (98.3 to 100)	100 (98.3 to 100)	
Anti-T: Post-dose 3: ≥ 0.1 (n=211,209,215)	100 (98.3 to 100)	100 (98.3 to 100)	100 (98.3 to 100)	
Anti-T: Post-dose 3: ≥ 1 (n=211,209,215)	96.2 (92.7 to 98.3)	95.7 (92.0 to 98.0)	96.7 (93.4 to 98.7)	
Anti-HBs: Day 0: ≥ 10 (n=211,208,215)	9.0 (5.5 to 13.7)	10.6 (6.7 to 15.6)	10.7 (6.9 to 15.6)	
Anti-HBs: Day 0: ≥ 100 (n=211,208,215)	4.3 (2.0 to 7.9)	7.7 (4.5 to 12.2)	3.3 (1.3 to 6.6)	
Anti-HBs: Post-Dose 3: ≥ 10 (n=209,208,210)	94.7 (90.8 to 97.3)	94.7 (90.7 to 97.3)	92.4 (87.9 to 95.6)	
Anti-HBs: Post-Dose 3: ≥ 100 (n=209,208,210)	79.4 (73.3 to 84.7)	88.0 (82.8 to 92.1)	81.9 (76.0 to 86.9)	
Anti-PRP: Day 0: ≥ 0.15 (n=207,211,208)	29.5 (23.4 to 36.2)	24.2 (18.6 to 30.5)	23.1 (17.5 to 29.4)	
Anti-PRP: Day 0: ≥ 1 (n=207,211,208)	4.8 (2.3 to 8.7)	4.7 (2.3 to 8.5)	4.3 (2.0 to 8.1)	
Anti-PRP: Post-dose 3: ≥ 0.15 (n=209,207,213)	99.5 (97.4 to 100)	99.5 (97.3 to 100)	100 (98.3 to 100)	

Anti-PRP: Post-dose 3: ≥ 1 (n=209,207,213)	94.7 (90.8 to 97.3)	94.2 (90.1 to 97.0)	93.0 (88.7 to 96.0)	
Anti-Polio 1: Day 0: ≥ 8 (n=216,219,221)	85.6 (80.3 to 90.0)	84.9 (79.5 to 89.4)	84.6 (79.2 to 89.1)	
Anti-Polio 1: Post-dose 3: ≥ 8 (n=210,209,214)	99.5 (97.4 to 100)	99.5 (97.4 to 100)	99.5 (97.4 to 100)	
Anti-Polio 2: Day 0: ≥ 8 (n=212,217,215)	64.6 (57.8 to 71.0)	57.6 (50.7 to 64.3)	58.1 (51.2 to 64.8)	
Anti-Polio 2: Post-dose 3: ≥ 8 (n=209,208,211)	99.0 (96.6 to 99.9)	98.6 (95.8 to 99.7)	98.1 (95.2 to 99.5)	
Anti-Polio 3: Day 0: ≥ 8 (n=212,216,214)	70.8 (64.1 to 76.8)	62.5 (55.7 to 69.0)	65.4 (58.6 to 71.8)	
Anti-Polio 3: Post-dose 3: ≥ 8 (n=209,205,212)	99.0 (96.6 to 99.9)	100 (98.2 to 100)	100 (98.3 to 100)	

Statistical analyses

No statistical analyses for this end point

Secondary: Primary Phase: Percentage of Subjects With Vaccine Response Against Pertussis Antigens

End point title	Primary Phase: Percentage of Subjects With Vaccine Response Against Pertussis Antigens
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End point description:

Pertussis antigens vaccine response status for anti-PT, anti-filamentous hemagglutinin (anti-FHA), anti-pertactin (PRN), and anti-FIM Abs was defined as follows: post-dose 3 vaccination concentration $\geq 4 \times$ lower limit of quantification (LLOQ) of the assay, if the pre-vaccination concentration was less than ($<$) $4 \times$ LLOQ of the assay or; post-dose 3 vaccination concentration $\geq$ the pre-vaccination concentration, if the pre-vaccination concentration was $\geq 4 \times$ LLOQ of the assay. Analysis was performed on FAS population. Here, 'number of subjects analysed' = subjects with available data for this endpoint.

End point type	Secondary
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End point timeframe:

28 days post third dose (i.e., Day 84)

End point values	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN 6	Group C: SHAN 5 + bOPV + IPV	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	206	201	206	
Units: percentage of subjects				
number (confidence interval 95%)				
Anti-PT	68.0 (61.1 to 74.3)	70.6 (63.8 to 76.8)	75.2 (68.8 to 81.0)	
Anti-FIM	94.7 (90.6 to 97.3)	98.5 (95.7 to 99.7)	97.1 (93.8 to 98.9)	
Anti-PRN	82.0 (76.1 to 87.0)	91.0 (86.2 to 94.6)	91.7 (87.1 to 95.1)	
Anti-FHA	53.4 (46.3 to 60.4)	56.7 (49.6 to 63.7)	78.6 (72.4 to 84.0)	

Statistical analyses

No statistical analyses for this end point

Secondary: Primary Phase: Percentage of Subjects With Vaccine Seroconversion Against Pertussis Antigens

End point title	Primary Phase: Percentage of Subjects With Vaccine Seroconversion Against Pertussis Antigens
End point description: Pertussis antigens vaccine seroconversion for anti-PT, anti-FHA, anti-PRN, and anti-FIM Abs were defined as follows: a $\geq$ 4-fold rise in the respective PT, FHA, PRN, FIM Ab concentration between pre-dose 1 (Day 0) and post-dose 3 (Day 84). Analysis was performed on FAS population. Here, 'number of subjects analysed' = subjects with available data for this endpoint.	
End point type	Secondary
End point timeframe: Pre-dose up to 28 days post third dose (i.e., Day 84)	

End point values	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN 6	Group C: SHAN 5 + bOPV + IPV	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	206	201	206	
Units: percentage of subjects				
number (confidence interval 95%)				
Anti-PT	61.2 (54.1 to 67.9)	61.7 (54.6 to 68.4)	67.0 (60.1 to 73.4)	
Anti-FIM	92.7 (88.3 to 95.9)	97.5 (94.3 to 99.2)	95.6 (91.9 to 98.0)	
Anti-PRN	79.6 (73.5 to 84.9)	86.1 (80.5 to 90.5)	87.4 (82.1 to 91.6)	
Anti-FHA	27.7 (21.7 to 34.3)	37.3 (30.6 to 44.4)	49.5 (42.5 to 56.5)	

Statistical analyses

No statistical analyses for this end point

Secondary: Primary Phase: Geometric Mean Concentrations Ratios (GMCRs) of Antibodies Against all the Antigens

End point title	Primary Phase: Geometric Mean Concentrations Ratios (GMCRs) of Antibodies Against all the Antigens
End point description: Antibodies to Diphtheria, Tetanus, PT, PRN, FIM and FHA were measured by Multiplexed Electro	

chemiluminescent method; Anti-HBs by enzyme-linked immunosorbent assay (ELISA); Anti-PRP by polyribosyl-ribitol phosphate Radioimmune assay (PRP-RIA); Poliovirus types 1, 2, and 3 by micro metabolic inhibition testing (MIT). Geometric mean Concentrations (GMCs) of antibodies against various antigens were measured in terms of: Anti-D and Anti-T Ab titers: IU/mL; Anti-PT, Anti-FIM, Anti-PRN, Anti-FHA: EU/mL; Anti-HBs Ab titers: mIU/mL; Anti-PRP Ab titer: mcg/mL; and Anti-polio 1, 2, and 3 Ab titers: 1/dil. GMCRs were calculated as the ratio of GMCs post vaccination (i.e., on Day 84) and pre-vaccination on Day 0. Analysis was performed on FAS population. Here, 'number of subjects analysed' = subjects with available data for this endpoint and 'n' = subjects with available data for each specified category.

End point type	Secondary
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End point timeframe:

Day 0 (pre-vaccination) and 28 days post third dose (i.e., Day 84)

End point values	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN 6	Group C: SHAN 5 + bOPV + IPV	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	206	201	206	
Units: ratio				
geometric mean (confidence interval 95%)				
Anti-D (n=206,201,206)	27.6 (18.6 to 40.9)	21.5 (14.2 to 32.5)	29.5 (20.7 to 41.9)	
Anti-T (n=206,201,206)	1.75 (1.41 to 2.16)	1.74 (1.40 to 2.15)	2.18 (1.76 to 2.71)	
Anti-PT (n=206,201,206)	10.9 (7.45 to 15.8)	10.4 (7.20 to 14.9)	12.4 (8.78 to 17.6)	
Anti-FIM (n=206,201,206)	167 (122 to 228)	253 (191 to 337)	207 (153 to 280)	
Anti-PRN (n=206,201,206)	18.5 (14.4 to 23.8)	23.9 (18.8 to 30.2)	30.9 (24.7 to 38.6)	
Anti-FHA (n=206,201,206)	1.73 (1.40 to 2.15)	2.03 (1.63 to 2.52)	3.92 (3.15 to 4.87)	
Anti-PRP (n=191,191,191)	89.9 (70.4 to 115)	87.3 (66.7 to 114)	93.0 (73.1 to 118)	
Anti-HBs (n=195,189,196)	87.3 (64.1 to 119)	161 (114 to 227)	94.7 (69.3 to 130)	
Anti-Polio 1 (n=200,199,204)	28.9 (22.5 to 37.1)	24.2 (19.3 to 30.3)	24.3 (19.1 to 30.9)	
Anti-Polio 2 (n=195,196,198)	47.7 (34.1 to 66.7)	69.2 (46.6 to 103)	8.97 (6.88 to 11.7)	
Anti-Polio 3 (n=197,194,196)	71.8 (52.6 to 98.2)	62.6 (44.9 to 87.3)	49.5 (37.0 to 66.3)	

Statistical analyses

No statistical analyses for this end point

Secondary: Primary Phase: Geometric Mean Concentrations Ratios (GMCRs) of Antibodies Against Anti-rotavirus and Anti-Streptococcus Pneumoniae Antigens

End point title	Primary Phase: Geometric Mean Concentrations Ratios (GMCRs) of Antibodies Against Anti-rotavirus and Anti-Streptococcus Pneumoniae Antigens
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End point description:

Anti-Rotavirus antibodies were detected by IgA enzyme immunoassay and Anti-Streptococcus pneumoniae antibodies (serotypes 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F, and 23F) were detected by pneumococcal capsular polysaccharide (PnPS) immunoglobulin G (IgG) electrochemiluminescence (ECL) assay in human serum. GMCs of antibodies against anti-rotavirus antigens were measured in terms of U/mL and pneumococcal serotypes in terms of mcg/mL. GMCRs were calculated as the ratio of GMCs post vaccination (i.e., on Day 84) and pre-vaccination on Day 0. Analysis was performed on FAS population. Here, 'number of subjects analysed' = subjects with available data for this endpoint and 'n' = subjects with available data for each specified category.

End point type	Secondary
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End point timeframe:

Day 0 (pre-vaccination) and 28 days post third dose (i.e., Day 84)

End point values	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN 6	Group C: SHAN 5 + bOPV + IPV	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	93	92	94	
Units: ratio				
geometric mean (confidence interval 95%)				
Anti-rotavirus (n=86,91,88)	13.8 (9.02 to 21.1)	11.7 (7.78 to 17.7)	9.59 (6.32 to 14.6)	
Anti-pneumococcal serotype 1 (n=93,92,94)	28.6 (23.0 to 35.5)	26.4 (20.9 to 33.3)	27.8 (21.4 to 36.2)	
Anti-pneumococcal serotype 4 (n=93,92,94)	29.0 (24.2 to 34.8)	26.0 (20.6 to 32.8)	26.8 (21.0 to 34.3)	
Anti-pneumococcal serotype 5 (n=93,92,94)	23.6 (19.2 to 29.0)	24.1 (19.9 to 29.1)	21.3 (16.1 to 28.2)	
Anti-pneumococcal serotype 6B (n=93,92,94)	17.7 (12.5 to 25.1)	16.2 (11.5 to 23.0)	15.4 (10.6 to 22.3)	
Anti-pneumococcal serotype 7F (n=93,92,94)	22.2 (17.6 to 28.0)	25.0 (19.6 to 31.8)	28.0 (21.9 to 35.8)	
Anti-pneumococcal serotype 9V (n=93,92,94)	22.5 (18.2 to 27.8)	18.3 (14.4 to 23.1)	20.0 (15.6 to 25.5)	
Anti-pneumococcal serotype 14 (n=92,91,94)	7.97 (5.46 to 11.6)	5.41 (3.66 to 8.01)	5.86 (4.01 to 8.57)	
Anti-pneumococcal serotype 18C (n=93,92,94)	21.2 (16.0 to 28.0)	15.2 (11.1 to 20.7)	26.2 (19.4 to 35.4)	
Anti-pneumococcal serotype 19F (n=93,92,94)	11.4 (8.22 to 15.9)	10.1 (6.90 to 14.9)	11.3 (8.04 to 15.8)	
Anti-pneumococcal serotype 23F (n=93,92,94)	9.63 (7.16 to 12.9)	8.21 (6.01 to 11.2)	7.71 (5.40 to 11.0)	

Statistical analyses

No statistical analyses for this end point

**Secondary: Primary Phase: Geometric Mean Concentrations (GMCs) of Antibodies
Against all the Antigens**

End point title	Primary Phase: Geometric Mean Concentrations (GMCs) of Antibodies Against all the Antigens
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End point description:

Antibodies to Diphtheria, Tetanus, Pertussis, PRN, FIM and FHA were measured by multiplexed electro chemiluminescent method; Anti-HBs by ELISA assay method; Anti-PRP by PRP-RIA; Poliovirus types 1, 2, and 3 by MIT. GMCs of antibodies against various antigens were measured in terms of: Anti-D and Anti-T Ab titers: IU/mL; Anti-PT, Anti-FIM, Anti-PRN, Anti-FHA: EU/mL; Anti-HBs Ab titers: mIU/mL; Anti-PRP Ab titer: mcg/mL; and Anti-polio 1, 2, and 3 Ab titers: 1/dilution. Analysis was performed on FAS population. Here, 'number of subjects analysed' = subjects with available data for this endpoint and 'n' = subjects with available data for each specified category.

End point type Secondary

End point timeframe:

Day 0 (pre-vaccination) and 28 days post third dose (i.e., Day 84)

End point values	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN 6	Group C: SHAN 5 + bOPV + IPV	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	221	221	222	
Units: concentrations				
geometric mean (confidence interval 95%)				
Anti-D: Day 0 (n=221,221,222)	0.070 (0.053 to 0.091)	0.084 (0.063 to 0.111)	0.081 (0.062 to 0.105)	
Anti-D: Post-dose 3 (n=211,209,215)	1.92 (1.63 to 2.26)	1.78 (1.53 to 2.08)	2.25 (1.99 to 2.56)	
Anti-T: Day 0 (n=221,221,222)	2.25 (1.96 to 2.59)	2.18 (1.86 to 2.55)	2.21 (1.89 to 2.57)	
Anti-T: Post-dose 3 (n=211,209,215)	3.90 (3.46 to 4.39)	3.75 (3.34 to 4.21)	4.73 (4.21 to 5.31)	
Anti-PT: Day 0 (n=221,221,222)	4.11 (3.51 to 4.80)	4.58 (3.96 to 5.31)	4.64 (4.03 to 5.34)	
Anti-PT: Post-dose 3 (n=211,209,215)	43.2 (33.1 to 56.3)	49.2 (38.0 to 63.8)	58.5 (46.3 to 74.0)	
Anti-FIM: Day 0 (n=221,221,222)	4.99 (4.13 to 6.03)	4.65 (3.87 to 5.59)	5.34 (4.39 to 6.49)	
Anti-FIM: Post-dose 3 (n=211,209,215)	831 (667 to 1034)	1118 (935 to 1338)	1068 (893 to 1278)	
Anti-PRN: Day 0 (n=221,221,222)	1.99 (1.75 to 2.27)	2.52 (2.18 to 2.92)	2.26 (1.96 to 2.60)	
Anti-PRN: Post-dose 3 (n=211,209,215)	36.5 (29.4 to 45.5)	59.5 (50.0 to 70.7)	69.7 (57.3 to 84.8)	
Anti-FHA: Day 0 (n=221,221,222)	12.1 (10.7 to 13.7)	12.6 (11.0 to 14.4)	12.3 (10.8 to 13.9)	
Anti-FHA: Post-dose 3 (n=211,209,215)	21.4 (18.5 to 24.8)	25.7 (22.3 to 29.6)	47.5 (41.2 to 54.7)	
Anti-PRP: Day 0 (n=207,211,208)	0.082 (0.068 to 0.098)	0.078 (0.065 to 0.093)	0.070 (0.060 to 0.082)	
Anti-PRP: Post-dose 3 (n=209,207,213)	7.38 (6.36 to 8.56)	6.97 (5.96 to 8.15)	6.46 (5.55 to 7.51)	
Anti-HBs: Day 0 (n=211,208,215)	3.59 (3.06 to 4.21)	4.12 (3.35 to 5.06)	3.61 (3.11 to 4.19)	
Anti-HBs: Post-dose 3 (n=209,208,210)	315 (252 to 395)	588 (459 to 752)	359 (277 to 464)	
Anti-Polio 1: Day 0 (n=216,219,221)	42.7 (34.6 to 52.8)	42.4 (34.4 to 52.3)	45.4 (36.3 to 56.9)	
Anti-Polio 1: Post-dose 3 (n=210,209,214)	1252 (1059 to 1482)	1105 (953 to 1281)	1168 (1003 to 1359)	

Anti-Polio 2: Day 0 (n=212,217,215)	11.6 (9.79 to 13.8)	10.4 (8.80 to 12.3)	9.61 (8.22 to 11.2)	
Anti-Polio 2: Post-dose 3 (n=209,208,211)	562 (462 to 683)	696 (537 to 902)	86.2 (73.5 to 101)	
Anti-Polio 3: Day 0 (n=212,216,214)	34.4 (26.1 to 45.4)	27.8 (21.1 to 36.7)	25.4 (19.4 to 33.2)	
Anti-Polio 3: Post-dose 3 (n=209,205,212)	2244 (1899 to 2652)	1977 (1718 to 2274)	1273 (1124 to 1442)	

Statistical analyses

No statistical analyses for this end point

Secondary: Primary Phase: Geometric Mean Concentrations (GMCs) of Antibodies Against Anti-rotavirus and Anti-S. pneumoniae Antigens

End point title	Primary Phase: Geometric Mean Concentrations (GMCs) of Antibodies Against Anti-rotavirus and Anti-S. pneumoniae Antigens
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End point description:

Anti-Rotavirus antibodies were detected by IgA enzyme immunoassay and Anti-Streptococcus pneumoniae (serotypes 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F, and 23F) antibodies were detected by PnPS IgG ECL assay in human serum. GMCs of antibodies against anti-rotavirus antigens were measured in terms of U/mL and for pneumococcal serotypes in terms of mcg/mL. Analysis was performed on FAS population. Here, 'number of subjects analysed' = subjects with available data for this endpoint and 'n' = subjects with available data for each specified category.

End point type	Secondary
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End point timeframe:

Day 0 (pre-vaccination) and 28 days post third dose (i.e., Day 84)

End point values	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN 6	Group C: SHAN 5 + bOPV + IPV	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	105	106	103	
Units: concentrations				
geometric mean (confidence interval 95%)				
Anti-rotavirus: Day 0 (n=95,98,101)	4.13 (3.66 to 4.66)	3.79 (3.72 to 3.86)	3.96 (3.67 to 4.26)	
Anti-rotavirus: Post-dose 3 (n=99,106,101)	57.4 (38.6 to 85.4)	45.3 (31.0 to 66.1)	39.1 (26.5 to 57.7)	
Serotype 1: Day 0 (n=100,104,103)	0.100 (0.089 to 0.112)	0.112 (0.098 to 0.127)	0.112 (0.099 to 0.128)	
Serotype 1: Post-dose 3 (n=105,100,102)	2.73 (2.33 to 3.19)	2.87 (2.42 to 3.40)	3.15 (2.63 to 3.77)	
Serotype 4: Day 0 (n=100,104,103)	0.093 (0.084 to 0.102)	0.112 (0.098 to 0.128)	0.113 (0.098 to 0.129)	
Serotype 4: Post-dose 3 (n=105,100,102)	2.67 (2.31 to 3.08)	2.92 (2.47 to 3.44)	3.08 (2.57 to 3.70)	
Serotype 5: Day 0 (n=100,104,103)	0.087 (0.080 to 0.094)	0.084 (0.078 to 0.090)	0.095 (0.085 to 0.106)	
Serotype 5: Post-dose 3 (n=105,100,102)	1.98 (1.67 to 2.34)	2.00 (1.70 to 2.37)	2.06 (1.68 to 2.52)	

Serotype 6B: Day 0 (n=100,104,103)	0.111 (0.095 to 0.129)	0.136 (0.116 to 0.160)	0.140 (0.119 to 0.165)	
Serotype 6B: Post-dose 3 (n=105,100,102)	1.92 (1.48 to 2.49)	2.22 (1.72 to 2.88)	2.15 (1.60 to 2.88)	
Serotype 7F: Day 0 (n=100,104,103)	0.128 (0.109 to 0.149)	0.130 (0.109 to 0.154)	0.129 (0.110 to 0.151)	
Serotype 7F: Post-dose 3 (n=105,100,102)	2.87 (2.50 to 3.30)	3.33 (2.88 to 3.84)	3.75 (3.24 to 4.34)	
Serotype 9V: Day 0 (n=100,104,103)	0.145 (0.122 to 0.172)	0.160 (0.135 to 0.190)	0.153 (0.131 to 0.178)	
Serotype 9V: Post-dose 3 (n=105,100,102)	3.11 (2.71 to 3.56)	2.99 (2.59 to 3.45)	3.17 (2.72 to 3.71)	
Serotype 14: Day 0 (n=100,103,103)	0.889 (0.713 to 1.11)	1.12 (0.902 to 1.40)	1.10 (0.879 to 1.37)	
Serotype 14: Post-dose 3 (n=104,100,102)	6.71 (5.38 to 8.35)	6.26 (4.98 to 7.86)	6.12 (4.77 to 7.86)	
Serotype 18C: Day 0 (n=100,104,103)	0.185 (0.156 to 0.219)	0.220 (0.188 to 0.258)	0.205 (0.172 to 0.244)	
Serotype 18C: Post-dose 3 (n=105,100,102)	3.95 (3.25 to 4.80)	3.41 (2.72 to 4.28)	5.34 (4.37 to 6.54)	
Serotype 19F: Day 0 (n=100,104,103)	0.308 (0.246 to 0.385)	0.346 (0.277 to 0.433)	0.330 (0.271 to 0.402)	
Serotype 19F: Post-dose 3 (n=105,100,102)	3.33 (2.63 to 4.21)	3.60 (2.86 to 4.54)	3.83 (3.07 to 4.77)	
Serotype 23F: Day 0 (n=100,104,103)	0.168 (0.141 to 0.201)	0.188 (0.155 to 0.226)	0.191 (0.158 to 0.232)	
Serotype 23F: Post-dose 3 (n=105,100,102)	1.61 (1.36 to 1.91)	1.47 (1.19 to 1.81)	1.49 (1.18 to 1.89)	

Statistical analyses

No statistical analyses for this end point

Secondary: Primary Phase: Percentage of Subjects With ≥ 4 -fold Rise in Anti-rotavirus Antibody Titers

End point title	Primary Phase: Percentage of Subjects With ≥ 4 -fold Rise in Anti-rotavirus Antibody Titers
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End point description:

Anti-Rotavirus antibodies were detected by IgA enzyme immunoassay. Percentage of subjects with ≥ 4 -fold rise in serum IgA anti-rotavirus Ab titers were reported in this endpoint. Analysis was performed on FAS population. Here, 'number of subjects analysed' = subjects with available data for this endpoint.

End point type	Secondary
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End point timeframe:

28 days post third dose (i.e., Day 84)

End point values	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN 6	Group C: SHAN 5 + bOPV + IPV	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	86	91	88	
Units: percentage of subjects				
number (confidence interval 95%)	70.9 (60.1 to	67.0 (56.4 to	58.0 (47.0 to	

Statistical analyses

No statistical analyses for this end point

Secondary: Primary Phase: Percentage of Subjects With Anti-pneumococcal Titers ≥ 0.35 mcg/mL

End point title	Primary Phase: Percentage of Subjects With Anti-pneumococcal Titers ≥ 0.35 mcg/mL
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End point description:

Anti-Streptococcus pneumoniae (serotypes 1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F, and 23F) antibodies were detected by PnPS IgG ECL assay in human serum. GMCs of antibodies against antirotavirus antigens were measured in terms of U/mL and for pneumococcal serotypes in terms of mcg/mL. Analysis was performed on FAS population. Here, 'number of subjects analysed' = subjects with available data for this endpoint and 'n' = subjects with available data for each specified category.

End point type	Secondary
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End point timeframe:

Day 0 (pre-vaccination) and 28 days post third dose (i.e., Day 84)

End point values	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN 6	Group C: SHAN 5 + bOPV + IPV	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	105	104	103	
Units: percentage of subjects				
number (confidence interval 95%)				
Serotype 1: Day 0 (n=100,104,103)	4.0 (1.1 to 9.9)	10.6 (5.4 to 18.1)	7.8 (3.4 to 14.7)	
Serotype 1: Post-dose 3 (n=105,100,102)	100 (96.5 to 100)	99.0 (94.6 to 100)	98.0 (93.1 to 99.8)	
Serotype 4: Day 0 (n=100,104,103)	4.0 (1.1 to 9.9)	9.6 (4.7 to 17.0)	8.7 (4.1 to 15.9)	
Serotype 4: Post-dose 3 (n=105,100,102)	98.1 (93.3 to 99.8)	99.0 (94.6 to 100)	99.0 (94.7 to 100)	
Serotype 5: Day 0 (n=100,104,103)	2.0 (0.2 to 7.0)	0 (0 to 3.5)	3.9 (1.1 to 9.6)	
Serotype 5: Post-dose 3 (n=105,100,102)	96.2 (90.5 to 99.0)	97.0 (91.5 to 99.4)	95.1 (88.9 to 98.4)	
Serotype 6B: Day 0 (n=100,104,103)	13.0 (7.1 to 21.2)	15.4 (9.1 to 23.8)	17.5 (10.7 to 26.2)	
Serotype 6B: Post-dose 3 (n=105,100,102)	88.6 (80.9 to 94.0)	87.0 (78.8 to 92.9)	85.3 (76.9 to 91.5)	
Serotype 7F: Day 0 (n=100,104,103)	12.0 (6.4 to 20.0)	15.4 (9.1 to 23.8)	10.7 (5.5 to 18.3)	
Serotype 7F: Post-dose 3 (n=105,100,102)	99.0 (94.8 to 100)	99.0 (94.6 to 100)	100 (96.4 to 100)	
Serotype 9V: Day 0 (n=100,104,103)	16.0 (9.4 to 24.7)	24.0 (16.2 to 33.4)	13.6 (7.6 to 21.8)	

Serotype 9V: Post-dose 3 (n=105,100,102)	100 (96.5 to 100)	100 (96.4 to 100)	99.0 (94.7 to 100)	
Serotype 14: Day 0 (n=100,103,103)	80.0 (70.8 to 87.3)	86.4 (78.2 to 92.4)	86.4 (78.2 to 92.4)	
Serotype 14: Post-dose 3 (n=104,100,102)	98.1 (93.2 to 99.8)	97.0 (91.5 to 99.4)	98.0 (93.1 to 99.8)	
Serotype 18C: Day 0 (n=100,104,103)	21.0 (13.5 to 30.3)	32.7 (23.8 to 42.6)	28.2 (19.7 to 37.9)	
Serotype 18C: Post-dose 3 (n=105,100,102)	98.1 (93.3 to 99.8)	96.0 (90.1 to 98.9)	99.0 (94.7 to 100)	
Serotype 19F: Day 0 (n=100,104,103)	48.0 (37.9 to 58.2)	48.1 (38.2 to 58.1)	45.6 (35.8 to 55.7)	
Serotype 19F: Post-dose 3 (n=105,100,102)	95.2 (89.2 to 98.4)	96.0 (90.1 to 98.9)	96.1 (90.3 to 98.9)	
Serotype 23F: Day 0 (n=100,104,103)	24.0 (16.0 to 33.6)	25.0 (17.0 to 34.4)	31.1 (22.3 to 40.9)	
Serotype 23F: Post-dose 3 (n=105,100,102)	91.4 (84.4 to 96.0)	90.0 (82.4 to 95.1)	82.4 (73.6 to 89.2)	

Statistical analyses

No statistical analyses for this end point

Secondary: Booster Phase: Percentage of Subjects With Antibody Titers Above Predefined Thresholds Against Diphtheria (D), Tetanus (T), Hepatitis B (Hep B), Haemophilus influenzae type b (Hib [PRP]) and Poliovirus (Polio) Antigens Following Booster Vaccination

End point title	Booster Phase: Percentage of Subjects With Antibody Titers Above Predefined Thresholds Against Diphtheria (D), Tetanus (T), Hepatitis B (Hep B), Haemophilus influenzae type b (Hib [PRP]) and Poliovirus (Polio) Antigens Following Booster Vaccination			
End point description:	Due to early termination of the study, Booster Phase endpoints data was not collected and analysed.			
End point type	Secondary			
End point timeframe:	Pre-booster and 28 days after the booster dose (at Day 525-890)			

End point values	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN 6	Group C: SHAN 5 + bOPV + IPV	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	0 ^[12]	0 ^[13]	0 ^[14]	
Units: percentage of subjects				
number (confidence interval 95%)	(to)	(to)	(to)	

Notes:

[12] - Data was not collected and analysed.

[13] - Data was not collected and analysed.

[14] - Data was not collected and analysed.

Statistical analyses

No statistical analyses for this end point

Secondary: Booster Phase: Percentage of Subjects With Vaccine Response Against Pertussis Antigens Following Booster Vaccination

End point title	Booster Phase: Percentage of Subjects With Vaccine Response Against Pertussis Antigens Following Booster Vaccination
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End point description:

Due to early termination of the study, Booster Phase endpoints data was not collected and analysed.

End point type	Secondary
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End point timeframe:

28 days after the booster dose (at Day 525-890)

End point values	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN 6	Group C: SHAN 5 + bOPV + IPV	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	0 ^[15]	0 ^[16]	0 ^[17]	
Units: percentage of subjects				
number (confidence interval 95%)	(to)	(to)	(to)	

Notes:

[15] - Data was not collected and analysed.

[16] - Data was not collected and analysed.

[17] - Data was not collected and analysed.

Statistical analyses

No statistical analyses for this end point

Secondary: Booster Phase: Percentage of Subjects With Vaccine Seroconversion Against Pertussis Antigens Following Booster Vaccination

End point title	Booster Phase: Percentage of Subjects With Vaccine Seroconversion Against Pertussis Antigens Following Booster Vaccination
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End point description:

Due to early termination of the study, Booster Phase endpoints data was not collected and analysed.

End point type	Secondary
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End point timeframe:

Pre-booster up to 28 days after the booster dose (at Day 525-890)

End point values	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN 6	Group C: SHAN 5 + bOPV + IPV	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	0 ^[18]	0 ^[19]	0 ^[20]	
Units: percentage of subjects				
number (confidence interval 95%)	(to)	(to)	(to)	

Notes:

[18] - Data was not collected and analysed.

[19] - Data was not collected and analysed.

[20] - Data was not collected and analysed.

Statistical analyses

No statistical analyses for this end point

Secondary: Primary Phase: Number of Subjects Reporting Immediate Unsolicited Adverse Events (AEs)

End point title	Primary Phase: Number of Subjects Reporting Immediate Unsolicited Adverse Events (AEs)
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End point description:

An AE was defined as any untoward medical occurrence in a subject who received study vaccine and does not necessarily had to have a causal relationship with treatment. An unsolicited AE was an observed AE that did not fulfill the conditions prelisted in the case report book (CRB) in terms of diagnosis and/or onset post-vaccination. All subjects were observed for 30 minutes after any vaccination, and any unsolicited AEs occurred during that time were recorded as immediate unsolicited AEs in the CRB. Analysis was performed on safety analysis set (SafAS) that included subjects who had received at least one dose of the study vaccine and were analysed according to the vaccine they actually received.

End point type	Secondary
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End point timeframe:

Within 30 minutes post-any vaccination

End point values	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN 6	Group C: SHAN 5 + bOPV + IPV	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	227	229	231	
Units: subjects	0	0	0	

Statistical analyses

No statistical analyses for this end point

Secondary: Primary Phase: Number of Subjects Reporting Solicited Injection Site and Systemic Reactions

End point title	Primary Phase: Number of Subjects Reporting Solicited Injection Site and Systemic Reactions
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End point description:

A solicited reaction (SR) was an expected adverse reaction (AR) observed and reported under conditions (nature and onset) prelisted (i.e., solicited) in the CRB and considered as related to vaccination. An AR was all noxious and unintended responses to a medicinal product related to any dose. Solicited injection site reactions included injection site tenderness, erythema and swelling. Solicited systemic reactions included fever, vomiting, crying abnormal, drowsiness, appetite lost and irritability. Analysis was performed on SafAS. Here, 'n' = subjects with available data for each specified category and "vacc." = vaccination.

End point type	Secondary
End point timeframe:	
Within 7 days post-any and each vaccination 1, 2 and 3	

End point values	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN 6	Group C: SHAN 5 + bOPV + IPV	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	227	229	231	
Units: subjects				
Tenderness: Post any vacc. (n=227,229,230)	206	200	210	
Tenderness: Post vacc. 1 (n=226,229,230)	185	183	187	
Tenderness: Post vacc. 2 (n=219,217,220)	181	161	176	
Tenderness: Post vacc. 3 (n=215,214,217)	164	162	175	
Erythema: Post any vacc. (n=227,229,230)	106	104	111	
Erythema: Post vacc. 1 (n=226,228,229)	68	76	73	
Erythema: Post vacc. 2 (n=219,217,220)	70	50	73	
Erythema: Post vacc. 3 (n=214,214,217)	58	52	68	
Swelling: Post any vacc. (n=227,229,230)	155	143	143	
Swelling: Post vacc. 1 (n=226,229,229)	122	110	95	
Swelling: Post vacc. 2 (n=219,217,220)	117	100	105	
Swelling: Post vacc. 3 (n=214,214,217)	103	102	102	
Fever: Post any vacc. (n=220,222,226)	70	74	67	
Fever: Post vacc. 1 (n=218,221,223)	34	35	33	
Fever: Post vacc. 2 (n=216,214,218)	36	30	28	
Fever: Post vacc. 3 (n=214,212,217)	33	45	28	
Vomiting: Post any vacc. (n=227,229,230)	85	84	90	
Vomiting: Post vacc. 1 (n=226,229,230)	48	47	58	
Vomiting: Post vacc. 2 (n=219,217,220)	40	36	44	
Vomiting: Post vacc. 3 (n=214,214,217)	38	36	37	
Crying abnormal: Post any vacc. (n=227,229,230)	180	187	191	
Crying abnormal: Post vacc. 1 (n=226,229,230)	149	152	153	
Crying abnormal: Post vacc. 2 (n=219,217,220)	144	142	153	
Crying abnormal: Post vacc. 3 (n=214,214,217)	139	134	144	
Drowsiness: Post any vacc. (n=227,229,230)	132	135	141	
Drowsiness: Post vacc. 1 (n=226,229,230)	88	98	103	
Drowsiness: Post vacc. 2 (n=219,217,220)	91	78	84	

Drowsiness: Post vacc. 3 (n=214,214,217)	86	85	100	
Appetite lost: Post any vacc. (n=227,229,230)	133	133	141	
Appetite lost: Post vacc. 1 (n=226,229,230)	92	92	91	
Appetite lost: Post vacc. 2 (n=219,217,221)	88	76	89	
Appetite lost: Post vacc. 3 (n=214,214,217)	84	78	87	
Irritability: Post any vacc. (n=227,229,230)	178	180	190	
Irritability: Post vacc. 1 (n=226,229,230)	151	140	152	
Irritability: Post vacc. 2 (n=219,217,220)	144	137	148	
Irritability: Post vacc. 3 (n=214,214,217)	132	139	148	

Statistical analyses

No statistical analyses for this end point

Secondary: Primary Phase: Number of Subjects Reporting Unsolicited Adverse Events (AEs)

End point title	Primary Phase: Number of Subjects Reporting Unsolicited Adverse Events (AEs)
-----------------	--

End point description:

An AE was defined as any untoward medical occurrence in a subject who received study vaccine and does not necessarily had to have a causal relationship with treatment. An unsolicited AE was an observed AE that did not fulfill the conditions prelisted in the CRB in terms of diagnosis and/or onset post-vaccination. Analysis was performed on SafAS. Here, 'n' = subjects with available data for each specified category.

End point type	Secondary
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End point timeframe:

From Day 0 up to Day 28 post any and each vaccination 1, 2 and 3

End point values	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN 6	Group C: SHAN 5 + bOPV + IPV	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	227	229	231	
Units: subjects				
Post any vaccination (n=227,229,231)	146	163	148	
Post vaccination 1 (n=227,229,231)	73	86	69	
Post vaccination 2 (n=219,217,221)	73	80	71	
Post vaccination 3 (n=216,215,219)	82	99	87	

Statistical analyses

No statistical analyses for this end point

Secondary: Primary Phase: Number of Subjects Reporting Serious Adverse Events (SAEs)

End point title	Primary Phase: Number of Subjects Reporting Serious Adverse Events (SAEs)
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End point description:

An AE was defined as any untoward medical occurrence in a subject who received study vaccine and does not necessarily had to have a causal relationship with treatment. An SAE was any untoward medical occurrence that at any dose resulted in death, life-threatening, initial or prolonged inpatient hospitalization, persistent or significant disability/incapacity, congenital anomaly/birth defect or a medically important event. Analysis was performed on SafAS.

End point type	Secondary
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End point timeframe:

From Baseline up to Day 84 post any vaccination

End point values	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN 6	Group C: SHAN 5 + bOPV + IPV	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	227	229	231	
Units: subjects	4	11	11	

Statistical analyses

No statistical analyses for this end point

Secondary: Booster Phase: Number of Subjects Reporting Immediate Unsolicited AEs Following Booster Vaccination

End point title	Booster Phase: Number of Subjects Reporting Immediate Unsolicited AEs Following Booster Vaccination
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End point description:

Due to early termination of the study, Booster Phase endpoints data was not collected and analysed.

End point type	Secondary
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End point timeframe:

Within 30 minutes post-any vaccination

End point values	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN 6	Group C: SHAN 5 + bOPV + IPV	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	0 ^[21]	0 ^[22]	0 ^[23]	
Units: subjects				

Notes:

[21] - Data was not collected and analysed.

[22] - Data was not collected and analysed.

[23] - Data was not collected and analysed.

Statistical analyses

No statistical analyses for this end point

Secondary: Booster Phase: Number of Subjects Reporting Solicited Injection Site and Systemic Reactions

End point title	Booster Phase: Number of Subjects Reporting Solicited Injection Site and Systemic Reactions
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End point description:

Due to early termination of the study, Booster Phase endpoints data was not collected and analysed.

End point type	Secondary
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End point timeframe:

Within 7 days post any vaccination

End point values	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN 6	Group C: SHAN 5 + bOPV + IPV	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	0 ^[24]	0 ^[25]	0 ^[26]	
Units: subjects				

Notes:

[24] - Data was not collected and analysed.

[25] - Data was not collected and analysed.

[26] - Data was not collected and analysed.

Statistical analyses

No statistical analyses for this end point

Secondary: Booster Phase: Number of Subjects Reporting Unsolicited Adverse Events (AEs)

End point title	Booster Phase: Number of Subjects Reporting Unsolicited Adverse Events (AEs)
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End point description:

Due to early termination of the study, Booster Phase endpoints data was not collected and analysed.

End point type	Secondary
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End point timeframe:

From Day 0 up to Day 28 post any vaccination

End point values	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN 6	Group C: SHAN 5 + bOPV + IPV	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	0 ^[27]	0 ^[28]	0 ^[29]	
Units: subjects				

Notes:

[27] - Data was not collected and analysed.

[28] - Data was not collected and analysed.

[29] - Data was not collected and analysed.

Statistical analyses

No statistical analyses for this end point

Secondary: Booster Phase: Number of Subjects Reporting Serious Adverse Events (SAEs)

End point title	Booster Phase: Number of Subjects Reporting Serious Adverse Events (SAEs)
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End point description:

Due to early termination of the study Booster Phase endpoints data was not collected and analysed.

End point type	Secondary
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End point timeframe:

From Day 84 up to Day 890 post booster injection

End point values	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN 6	Group C: SHAN 5 + bOPV + IPV	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	0 ^[30]	0 ^[31]	0 ^[32]	
Units: subjects				

Notes:

[30] - Data was not collected and analysed.

[31] - Data was not collected and analysed.

[32] - Data was not collected and analysed.

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Unsolicited AEs: Day 0 to Day 28 post any vaccination SR: within 7 post any vaccination; SAE: From Baseline up to Day 84 post-any vaccination for primary phase of the study

Adverse event reporting additional description:

SR was AE that was prelisted (i.e., solicited) in the eCRF and considered to be related to vaccination (adverse drug reaction). An unsolicited AE was an observed AE that did not fulfill the conditions prelisted (i.e., solicited) in the eCRF in terms of symptom and/or onset post-vaccination. SafAS. In AE section, SR fever is reported as pyrexia.

Assessment type	Systematic
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Dictionary used

Dictionary name	MedDRA
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Dictionary version	24.1
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Reporting groups

Reporting group title	Group A: SHAN6
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Reporting group description:

Infants aged 6-8 weeks (at the time of enrollment) received SHAN6 vaccine, co-administered with PCV and ORV vaccines at the age of 6 to 8 weeks, 10 to 12 weeks and 14-16 weeks in the primary phase of the study.

Reporting group title	Group B: SHAN6/SHAN 5+bOPV/SHAN6
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Reporting group description:

Infants aged 6-8 weeks (at the time of enrollment) received SHAN6 vaccine at the age of 6 to 8 weeks, along with SHAN5 + bOPV at the age of 10 to 12 weeks and SHAN6 at the age of 14-16 weeks, co-administered with PCV and ORV vaccines at the age of 6 to 8 weeks, 10 to 12 weeks and 14-16 weeks in the primary phase of the study.

Reporting group title	Group C: SHAN 5 + bOPV + IPV
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Reporting group description:

Infants aged 6-8 weeks (at the time of enrollment) received SHAN5+bOPV vaccine, co-administered with PCV and ORV vaccines at the age of 6 to 8 weeks, 10 to 12 weeks and 14-16 weeks and IPV at 14 to 16 weeks in the primary phase of the study.

Serious adverse events	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN6	Group C: SHAN 5 + bOPV + IPV
Total subjects affected by serious adverse events			
subjects affected / exposed	4 / 227 (1.76%)	11 / 229 (4.80%)	11 / 231 (4.76%)
number of deaths (all causes)	1	3	1
number of deaths resulting from adverse events			
Injury, poisoning and procedural complications			
Thermal Burn			
subjects affected / exposed	0 / 227 (0.00%)	1 / 229 (0.44%)	0 / 231 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 1	0 / 0
General disorders and administration site conditions			

Extensive Swelling Of Vaccinated Limb			
subjects affected / exposed	1 / 227 (0.44%)	0 / 229 (0.00%)	0 / 231 (0.00%)
occurrences causally related to treatment / all	1 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Respiratory, thoracic and mediastinal disorders			
Bronchospasm			
subjects affected / exposed	0 / 227 (0.00%)	2 / 229 (0.87%)	0 / 231 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 2	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Infections and infestations			
Infectious Pleural Effusion			
subjects affected / exposed	0 / 227 (0.00%)	1 / 229 (0.44%)	0 / 231 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Bronchiolitis			
subjects affected / exposed	0 / 227 (0.00%)	1 / 229 (0.44%)	0 / 231 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Malaria			
subjects affected / exposed	1 / 227 (0.44%)	3 / 229 (1.31%)	5 / 231 (2.16%)
occurrences causally related to treatment / all	0 / 1	0 / 3	0 / 5
deaths causally related to treatment / all	0 / 1	0 / 1	0 / 1
Pneumonia			
subjects affected / exposed	2 / 227 (0.88%)	4 / 229 (1.75%)	6 / 231 (2.60%)
occurrences causally related to treatment / all	0 / 2	0 / 4	0 / 6
deaths causally related to treatment / all	0 / 0	0 / 1	0 / 0

Frequency threshold for reporting non-serious adverse events: 5 %

Non-serious adverse events	Group A: SHAN6	Group B: SHAN6/SHAN 5+bOPV/SHAN6	Group C: SHAN 5 + bOPV + IPV
Total subjects affected by non-serious adverse events			
subjects affected / exposed	218 / 227 (96.04%)	219 / 229 (95.63%)	221 / 231 (95.67%)

Nervous system disorders Somnolence subjects affected / exposed occurrences (all)	132 / 227 (58.15%) 265	135 / 229 (58.95%) 261	141 / 231 (61.04%) 287
General disorders and administration site conditions Pyrexia	Additional description: Pyrexia/Fever events that occurred after 7 days post-vaccination were considered as unsolicited AE.		
subjects affected / exposed occurrences (all)	74 / 227 (32.60%) 107	76 / 229 (33.19%) 113	68 / 231 (29.44%) 90
Injection Site Swelling subjects affected / exposed occurrences (all)	155 / 227 (68.28%) 341	143 / 229 (62.45%) 312	143 / 231 (61.90%) 376
Injection Site Pain subjects affected / exposed occurrences (all)	206 / 227 (90.75%) 530	200 / 229 (87.34%) 506	210 / 231 (90.91%) 689
Injection Site Erythema subjects affected / exposed occurrences (all)	106 / 227 (46.70%) 195	104 / 229 (45.41%) 178	111 / 231 (48.05%) 264
Crying subjects affected / exposed occurrences (all)	180 / 227 (79.30%) 432	187 / 229 (81.66%) 428	191 / 231 (82.68%) 450
Gastrointestinal disorders Vomiting subjects affected / exposed occurrences (all)	85 / 227 (37.44%) 126	84 / 229 (36.68%) 119	90 / 231 (38.96%) 139
Respiratory, thoracic and mediastinal disorders Rhinitis Allergic subjects affected / exposed occurrences (all)	15 / 227 (6.61%) 15	13 / 229 (5.68%) 14	13 / 231 (5.63%) 13
Psychiatric disorders Irritability subjects affected / exposed occurrences (all)	178 / 227 (78.41%) 426	180 / 229 (78.60%) 416	190 / 231 (82.25%) 449
Infections and infestations Viral Upper Respiratory Tract Infection subjects affected / exposed occurrences (all)	19 / 227 (8.37%) 24	18 / 229 (7.86%) 19	15 / 231 (6.49%) 19

Upper Respiratory Tract Infection subjects affected / exposed occurrences (all)	52 / 227 (22.91%) 56	50 / 229 (21.83%) 60	55 / 231 (23.81%) 64
Rhinitis subjects affected / exposed occurrences (all)	26 / 227 (11.45%) 28	34 / 229 (14.85%) 40	25 / 231 (10.82%) 26
Pneumonia subjects affected / exposed occurrences (all)	22 / 227 (9.69%) 27	25 / 229 (10.92%) 32	25 / 231 (10.82%) 31
Malaria subjects affected / exposed occurrences (all)	14 / 227 (6.17%) 14	27 / 229 (11.79%) 30	18 / 231 (7.79%) 20
Gastroenteritis subjects affected / exposed occurrences (all)	13 / 227 (5.73%) 13	18 / 229 (7.86%) 20	14 / 231 (6.06%) 16
Metabolism and nutrition disorders Decreased Appetite subjects affected / exposed occurrences (all)	133 / 227 (58.59%) 264	133 / 229 (58.08%) 246	141 / 231 (61.04%) 267

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
08 January 2020	Following changes were made: Added that the SHAN6 vaccine for this study could be used either as a single dose formulation or a multidose formulation depending on stocks available at the beginning of the study; the subset of subjects for the determination of the immune response against ORV and PCV antigens were updated. Initially half of the subjects were to be selected randomly on this purpose; The study was realised on infants and toddlers. Therefore, the blood volume taken was low and might have not been sufficient to perform both tests. In order to achieve the immunological objective initially planned, the Sponsor decided to realize the test against ORV antigen on half of the subjects, and the test against PCV on the other half of the subjects.
20 May 2021	Following changes were made: New study visit was added before booster administration and the booster administration was extended from 18 months to 18-30 months of age. An ICF addendum had been implemented accordingly. The closer to day care/school entry the booster dose is received, the better the boosting effect. The study design was also updated to include the possibility for subjects to receive coronavirus disease 2019 (COVID-19) vaccine, if available.

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

Limitations of the trial such as small numbers of subjects analysed or technical problems leading to unreliable data.

Due to early termination of the study, booster phase endpoint data was not collected and analysed.

Notes: